# FACT SHEET

## Smoking, Chronic Disease, and Death

In the United States, 480,000 people die prematurely each year from tobacco-related chronic disease. For each person who dies from tobacco use, another 20 people have at least one tobacco-related illness. The total economic costs of smoking are high in Wyoming: \$240 million in public and private health care costs and \$450 million from lost productivity in 2010.

In Wyoming, current and former smokers (adults who have smoked at least 100 cigarettes in their lifetime) are significantly more likely to have been diagnosed with several chronic diseases than nonsmokers (adults who have smoked fewer than 100 cigarettes in their lifetime).<sup>4</sup>

Chronic Disease Diagnosis by Smoking Status in Wyoming<sup>4</sup>

Individuals Who Were Told by a Healthcare Professional	Smoked at Least 100 Cigarettes	Smoked Fewer than 100 Cigarettes
They Had		
High blood pressure, or hypertension	31%	23%
High cholesterol	26%	20%
Asthma	15%	11%
Diabetes	11%	6%
Heart Disease	11%	4%
Cancer (other than skin cancer)	9%	4%
Chronic lung disease	9%	2%

Although there is no safe level of exposure to tobacco smoke, greater exposure increases the risk for and severity of chronic disease. Cigarette smoke contains cancer-causing agents and chemicals linked to biological mechanisms that cause cardiovascular diseases, pulmonary diseases, respiratory diseases, and contribute to poor reproductive and dental health. More than 7,000 toxic chemicals comprise cigarette smoke, including ammonia, tar, and carbon monoxide. These chemicals increase the risk for developing preventable chronic diseases for smokers and those who breathe secondhand smoke.<sup>5</sup>

### Cancer

In 2010, cancer was the leading cause of death in Wyoming.<sup>6</sup> Smoking increases the risks of the following cancers: <sup>1,7</sup>

- Acute myeloid leukemia,
- Bladder,
- Cervix,
- Colorectum,
- Esophagus,
- Kidney,
- Larynx,
- Liver.

- Lung,
- Mucinous ovarian,
- Nose and sinuses,
- Oral cavity,
- Pancreas,
- Stomach,
- Throat.

Ten years after quitting, risks of cancers of the mouth, throat, esophagus, and bladder are cut in half. Cervical cancer risk falls to that of a nonsmoker. <sup>8</sup>

### Cardiovascular Disease

In 2010, diseases of the heart were the second leading cause of death in Wyoming.<sup>6</sup> Smoking is a major cause of coronary heart disease.<sup>9</sup>

- The risk of developing coronary heart disease is two to four times greater for smokers than for nonsmokers.
- Nonsmokers who are exposed to secondhand smoke are also at greater risk for developing coronary heart disease than those who are not exposed to secondhand smoke.

One year after quitting smoking, the excess risk of coronary heart disease is half that of a smoker. Fifteen years after quitting, the risk is the same as a nonsmoker.<sup>8</sup>

## **Chronic Obstructive Pulmonary Disease**

In 2010, chronic lower respiratory diseases, such as chronic obstructive pulmonary disease (COPD), were the fourth leading cause of death in Wyoming.<sup>6</sup> COPD refers to a group of lung diseases characterized by obstruction of airflow that interferes with normal breathing. Nearly all, 85–90%, of COPD cases are attributable to smoking.<sup>10</sup> Wyoming's 2010 COPD-related death rate was among the thirteen highest states.<sup>6</sup>

One to nine months after quitting, cilia in the lungs regain normal function, increasing the ability to handle mucus, clean the lungs, and reduce the risk of infection. <sup>8</sup>

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# FACT SHEET cont.

### **Stroke**

In 2010, cerebrovascular disease (stroke) was the fifth leading cause of death in Wyoming.<sup>6</sup> Compared to nonsmokers, smoking doubles the risk of stroke for both men and women.<sup>11</sup>

Two to five years after quitting, the risk of stroke decreases to that of nonsmokers. <sup>8</sup>

### Risks of Secondhand Smoke

Research has consistently shown that exposure to secondhand smoke is detrimental to human health. Breathing secondhand smoke significantly increases the chance of stroke in nonsmokers, <sup>1</sup> even with low levels of exposure. <sup>12</sup> Each year in the United States, <sup>13</sup>

- 3,000 nonsmokers die of lung cancer,
- 150,000–300,000 children younger than 18 months develop lower respiratory tract infections from exposure to secondhand smoke.

Exposure to secondhand smoke has also been associated with impaired lung function in children, which is related to COPD in adulthood.<sup>14</sup>

- <sup>1</sup> U.S. Department of Health and Human Services. (2014). The Health Consequences of Smoking – 50 years of Progress: A Report of the Surgeon General. Retrieved January 21, 2014, from http://www.cdc.gov
- <sup>2</sup> Centers for Disease Control and Prevention. (2003). Cigarette smoking-attributable morbidity—United States, 2000. *Morbidity and Mortality Weekly Report*, 52(35), 842–844. Retrieved January 25, 2013, from <a href="http://www.cdc.gov">http://www.cdc.gov</a>
- <sup>3</sup> WYSAC. (2012). Cost of Substance Abuse in Wyoming 2010, by N. M. Nelson, M. Kato, & H. Costello. (WYSAC Technical Report No. DER-1250). Laramie, WY: Wyoming Survey & Analysis Center, University of Wyoming.
- <sup>4</sup> WYSAC. (2014). Report on the 2012 Wyoming Adult Tobacco Survey, by M. Kato, L.H. Despain, & T. Comer Cook. (WYSAC Technical Report No. CHES-1408). Laramie, WY: Wyoming Survey & Analysis Center, University of Wyoming.
- <sup>5</sup> U.S. Department of Health and Human Services. (2014). The Health Consequences of Smoking – 50 years of Progress: a Report of the Surgeon General. Retrieved January 21, 2014, from <a href="http://www.cdc.gov">http://www.cdc.gov</a>
- <sup>6</sup> Centers for Disease Control and Prevention. (2012). LCWK9. Deaths, percent of total deaths, and death rates for the 15 leading causes of death: United States and each state, 2010. Retrieved December 12, 2012, from <a href="http://www.cdc.gov">http://www.cdc.gov</a>
- <sup>7</sup> American Cancer Society. (2013). Cigarette smoking. Retrieved January 29, 2013, from <a href="http://www.cancer.org">http://www.cancer.org</a>
- <sup>8</sup> American Cancer Society. (2014). Guide to quitting smoking. Retrieved August 1, 2014, from <a href="http://www.cancer.org">http://www.cancer.org</a>
- <sup>9</sup> American Heart Association. (2012). Smoking & cardiovascular disease (heart disease). Retrieved December 10, 2012, from http://www.heart.org
- <sup>10</sup> American Lung Association. (2011). Chronic obstructive pulmonary disease (COPD) fact sheet. Retrieved May 22, 2012, from <a href="http://www.lung.org">http://www.lung.org</a>
- <sup>11</sup> National Stroke Association. (2013). *Tobacco use & smoking*. Retrieved February 18, 2013, from <a href="http://www.stroke.org">http://www.stroke.org</a>
- <sup>12</sup> Ono, I. P., Mackay, D. F., & Pell, J. P. (2011). Meta-analysis of the association between secondhand smoke exposure and stroke. *Journal* of *Public Health*, 33, 496–502. doi: 10.1093/pubmed/fdr025
- <sup>13</sup> Centers for Disease Control and Prevention. (2012). *Tobacco use: Targeting the nation's leading killer at a glance 2011*. Retrieved January 31, 2013, from <a href="http://www.cdc.gov">http://www.cdc.gov</a>
- <sup>14</sup> Johannessen, A., Bakke, P. S., Hardie, J. A., & Eagan, T. M. L. (2012). Association of exposure to environmental tobacco smoke in childhood with chronic obstructive pulmonary disease and respiratory symptoms in adults. *Respirology*, 17, 499–505. doi: 10.1111/j.1440-1843.2012.02129.x

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